

We Claim:

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1. A process for converting a C₄+ naphtha hydrocarbon feed to a product which includes light olefins and aromatics, comprising:
5 contacting said feed with a catalyst comprising zeolite ZSM-5, ZSM-11 or combinations thereof, phosphorus and a substantially inert matrix material, said contacting under conditions to produce said product containing light olefins and aromatics.

2. The process of Claim 1 wherein the C₄+ naphtha hydrocarbon feed includes feeds having boiling point ranges from about 80°F (27°C) up to about 430°F (221°C).

3. The process of Claim 1 wherein the zeolite makes up about 5 to 75 wt. % of the catalyst, the substantially inert matrix material makes up about 25 to about 95 wt. % of the catalyst and phosphorus is present in amount of about 0.5 to 10 wt. % of the catalyst.

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4. The process of Claim 3 wherein the zeolite has an initial silica/alumina molar ratio less than about 70.

5. The process of Claim 1 wherein the substantially inert matrix material comprises silica, clay or mixtures thereof and said matrix material comprises less than about 20 wt. % active matrix material.

6. The process of Claim 1 wherein said conditions comprise a temperature from about 950°F (510°C) to about 1300°F (704.4°C), a hydrocarbon partial pressure from about 2 to about 115 psia (0.1 to about 8 bar), a catalyst/hydrocarbon feed weight ratio from about 0.01 to about 30, and a WHSV from about 1 to about 20 hr⁻¹.

7. The process of Claim 1 wherein the product comprises ethylene and propylene, with a $C_2=C_3$ wt. ratio greater than 0.39, and increased amounts of toluene and xylene relative to the hydrocarbon feed.

8. The process of Claim 1 further comprising co-feeding steam under conversion conditions in an amount from about 5 to about 30 wt % of the steam/feed mixture.

9. The process of Claim 8 wherein the product comprises ethylene and propylene, with a $C_2=C_3$ wt. ratio greater than about 0.6, and increased amounts of toluene and xylene relative to the hydrocarbon feed.

10. The process of Claim 1 wherein the light olefins in the product comprise ethylene plus propylene in an amount greater than about 25 wt. % based on total product.